

AMENDMENTS TO THE CLAIMS

1-9. (Canceled)

10. (Currently amended) A method of preserving motor function in a mammal afflicted with symptoms of or at risk of amyotrophic lateral sclerosis, comprising administering to said mammal a morphogen, ~~comprising~~ wherein the morphogen:

(1) ~~comprises~~ a dimeric protein having an amino acid sequence ~~selected from the group consisting of a sequence with:~~

- (a) ~~having~~ at least 70% homology with the C-terminal seven-cysteine skeleton of human OP-1, residues 330-431 of SEQ ID NO: 2;
- (b) ~~having~~ greater than 60% amino acid sequence identity with said C-terminal seven-cysteine skeleton of human OP-1;
- (c) defined by Generic Sequence 7, SEQ ID NO: 4;
- (d) defined by Generic Sequence 8, SEQ ID NO: 5;
- (e) defined by Generic Sequence 9, SEQ ID NO: 6;
- (f) defined by Generic Sequence 10, SEQ ID NO: 7, ~~and, or~~
- (g) defined by OPX, SEQ ID NO: 3; and

(2) ~~wherein said morphogen~~ stimulates production of an N-CAM or L1 isoform by an NG108-15 cell *in vitro*;

whereby motor function is preserved in said mammal.

11. (Canceled)

12. (Currently amended) A method of preserving motor function in a mammal afflicted with symptoms of or at risk of a spinal cord injury, comprising administering to said mammal a morphogen ~~comprising~~, wherein the morphogen:

(1) ~~comprises~~ a dimeric protein having an amino acid sequence ~~selected from the group consisting of a sequence with:~~

- (a) ~~having~~ at least 70% homology with the C-terminal seven-cysteine skeleton of human OP-1, residues 330-431 of SEQ ID NO: 2;

- (b) ~~having~~ greater than 60% amino acid sequence identity with said C-terminal seven-cysteine skeleton of human OP-1;
- (c) defined by Generic Sequence 7, SEQ ID NO: 4;
- (d) defined by Generic Sequence 8, SEQ ID NO: 5;
- (e) defined by Generic Sequence 9, SEQ ID NO: 6;
- (f) defined by Generic Sequence 10, SEQ ID NO: 7, ~~and~~; or
- (g) defined by OPX, SEQ ID NO: 3, ~~and~~

~~(2) wherein said morphogen~~ stimulates production of an N-CAM or L1 isoform by an NG108-15 cell *in vitro*;

whereby motor function is preserved in said mammal.

13-18. **(Canceled)**

19. **(Currently amended)** A method of preserving motor function in a mammal ~~afflicted~~ with symptoms of or at risk of amyotrophic lateral sclerosis, comprising administering to said mammal a morphogen selected from ~~the group consisting of~~ human OP-1, mouse OP-1, human OP-2, mouse OP-2, 60A, GDF-1, BMP2A, BMP2B, DPP, Vgl, Vgr-1, BMP3, BMP5, ~~and or~~ BMP6, wherein said morphogen stimulates production of an N-CAM or L1 isoform by an NG108-15 cell *in vitro* whereby motor function is preserved in said mammal.

20. **(Canceled)**

21. **(Currently amended)** A method of preserving motor function in a mammal ~~afflicted~~ with symptoms of or at risk of a spinal cord injury, comprising administering a morphogen selected from ~~the group consisting of~~ human OP-1, mouse OP-1, human OP-2, mouse OP-2, 60A, GDF-1, BMP2A, BMP2B, DPP, Vgl, Vgr-1, BMP3, BMP5, ~~and or~~ BMP6, wherein said morphogen stimulates production of an N-CAM or L1 isoform by an NG108-15 cell *in vitro* whereby motor function is preserved in said mammal.

22-23. **(Canceled)**

24. **(New)** The method of claim 10, wherein the morphogen comprises a dimeric protein having an amino acid sequence with at least 70% homology with the C-

terminal seven-cysteine skeleton of human OP-1, residues 330-431 of SEQ ID NO: 2.

25. **(New)** The method of claim 10, wherein the morphogen comprises a dimeric protein having an amino acid sequence with greater than 60% amino acid sequence identity with said C-terminal seven-cysteine skeleton of human OP-1.
26. **(New)** The method of claim 12, wherein the morphogen comprises a dimeric protein having an amino acid sequence with at least 70% homology with the C-terminal seven-cysteine skeleton of human OP-1, residues 330-431 of SEQ ID NO: 2.
27. **(New)** The method of claim 12, wherein the morphogen comprises a dimeric protein having an amino acid sequence with greater than 60% amino acid sequence identity with said C-terminal seven-cysteine skeleton of human OP-1.